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STATE OF MONTANA

DEPARTMENT OF PROFESSIONAL AND
OCCUPATIONAL LICENSING

BOARD OF PLUMBERS

Report on the Need for State Regulation
of the Plumbing Trade

1978

A SUNSET PERFORMANCE REVIEW



STATE OF MONTANA

Office of the Legislative Auditor

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July 28, 1978

The Legislative Audit Committee
of the Montana State Legislature:

Herein transmitted is our sunset performance audit of the Montana State Board of Plumbers. The audit was conducted in response to the 1977 sunset law, which terminates the board on July 1, 1979. The intent of the audit was to determine the need for state regulation of Montana's plumbing trade.

The audit focused upon the six questions of the sunset law and includes an examination of board operations. It does not encompass a review of the board's financial transactions or overall compliance with state laws.

There are no formal recommendations in the report since the responsibility for such recommendations lies with the Legislative Audit Committee. Nevertheless, we discussed the contents of the report with a large number of individuals and organizations, including the director of the Department of Professional and Occupational Licensing, the members of the Board of Plumbers, the Governor's Office of Budget and Program Planning, the Building Codes Division of the Department of Administration, the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry, and the Associated Plumbing and Heating Contractors of Montana.

We wish to express our appreciation to the members of the board and to the director of the department and his staff for the assistance they provided during the audit. We also wish to thank other members of the plumbing trade for assistance they gave us.

Respectfully submitted,

Morris L. Bruset

Morris L. Bruset, C.P.A.
Legislative Auditor

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APPOINTIVE AND ADMINISTRATIVE OFFICIALS

BOARD OF PLUMBERS

		<u>Term Expires</u>
Walter E. Tynes, Jr., Chairman	Great Falls	1979
Arthur W. Clarkson, Secretary	Helena	Permanent
Floyd Steward	Butte	1982
Don Kristensen	Bozeman	1979
Mike Mizenko	Great Falls	1982
John F. Harwood	Plains	1981
Roy Prussing	Billings	1980

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL LICENSING

Ed Carney	Director
Diana Cutler	Administrative Secretary
Robert C. Rogers	License Inspector

OFFICE OF THE LEGISLATIVE AUDITOR

SUNSET PERFORMANCE AUDIT OF THE
MONTANA BOARD OF PLUMBERS
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL LICENSING

SUMMARY

Montana's 1977 Legislature passed Senate Bill 162 as Chapter 562, Laws of Montana, 1977, commonly referred to as the "sunset law," which terminates numerous regulatory boards and agencies and specifically calls for a performance audit of each agency prior to scheduled termination. The sunset law terminates the Board of Plumbers on July 1, 1979. This performance audit is in response to the legal requirement for review of the board prior to termination.

Chapter I (page 1) introduces the report by explaining the objectives and intent of sunset legislation, the six questions which relate to the need for state regulation and activities of the state directed toward meeting that need, and the scope of our audit.

Chapter II (page 4) provides a background on the evolution of the trade and a brief history of licensing within Montana. Included is a short history of the board's financial operations (page 6) and an explanation of its operating objectives (page 9).

Chapter III (page 13) addressed the need for regulating the Montana plumbing trade in view of actual or potential harm to the public. Two questions are answered--(1) Would the absence of regulation significantly harm and endanger the public's health, safety, or welfare; and (2) Is there a reasonable relationship between the exercise of the state's police power and the protection

of the public's health, safety, and welfare? In answer to the first question, we conclude (page 26) that there appears to be a remote potential of danger to the public's health, safety, and welfare and that some form of regulation is necessary. We found no documented cases of physical harm or death due to faulty plumbing installations within Montana. Faulty installations in other states have been blamed for the spread of disease, some resulting in deaths. Cases of financial loss, due to improper installations, have occurred in Montana. We found further that the Building Codes Division of the Department of Administration has an inspection process which covers nonexempt plumbing installations but relies substantially on licensure for assistance in evaluating the extent of inspection necessary.

The second question relates to whether the current activities are sufficient to protect the public from potential harm addressed in the first question. In this regard, we did not conclude that general licensure provisions are reasonably related to the need for regulation. We found that three possibilities exist which may meet the need. However, if licensing is considered necessary some aspects of the current exercise of the state's police powers and the protection of the public's health, safety, and welfare require improvements (page 19). Enforcement to assure that all persons performing plumbing installations are licensed should be improved along with measures to assure qualification of licensed plumbers. Technical expertise should be obtained in evaluating the examination to assure that it is adequately predictive of a plumber's ability to perform plumbing work.

Chapter IV (page 28) addresses a single question--Are all facets of the regulatory process designed solely for the purpose of, and have as their primary effect, the protection of the public? This considers the possibility that many regulatory activities may be more related to protecting the interests of the plumbing trade rather than the public's health, safety, and welfare. The chapter considers the need for public participation in board meetings (page 28) and a need for public awareness of the licensure law to enhance enforcement (page 30). Further selective requirements for entry into the plumbing trade which constitute unnecessary restrictions are discussed (page 31).

Chapter V (page 38) addresses two questions--Does the regulation have the effect of directly or indirectly increasing the cost of goods or services; and, Is the increase in cost more harmful to the public than the harm which could result from the absence of regulation? Various regulation costs are identified and measured when feasible. Generally, the costs of regulation are unmeasurable although existent. We conclude that the potential danger could be resolved by code inspection at higher costs (page 42).

Chapter VI (page 44) addresses the sixth and final question--Is there another less restrictive method of regulation available which could adequately protect the public? The report discusses the present form of regulation used in Montana and other less restrictive alternatives which are available including no regulation (page 44). Included are four tables designed to aid the

Legislative Audit Committee in recommending the regulatory alternative most appropriate for Montana, and alternative regulatory facets under each form of regulation (pages 49, 50, 51, and 52).

Chapter I

INTRODUCTION

This sunset performance audit addresses the need for state regulation of the plumbing trade by the Board of Plumbers, a state board within the Department of Professional and Occupational Licensing. The Board of Plumbers (hereafter referred to as the "board") is responsible for licensing and regulating master and journeyman plumbers. State law (Section 66-2401.1(7), R.C.M. 1947), defines the field of plumbing as, "The business, trade, or work having to do with the installation, removal, alteration, or repair of plumbing and drainage systems or parts thereof."

REPORT OBJECTIVES

A number of regulatory boards and agencies, including the Board of Plumbers, were terminated by the 1977 Legislature through the "sunset law." This law requires the Legislative Audit Committee to conduct a performance audit of each terminated board. The performance audit must objectively review the need for each regulatory board/agency and the Legislative Audit Committee must offer recommendations for board reestablishment, modification, or termination.

In setting forth legislative intent, the sunset law, Section 82-4601(1), R.C.M. 1947, provides that, by requiring periodic evaluation in the form of a performance audit, the legislature will be in a better position to ensure that boards and programs exist only to be responsive to state citizens' needs. The sunset law terminates the board on July 1, 1979. This performance audit

is in response to the legal requirement for review prior to board termination.

REPORT ORGANIZATION

The sunset law (Section 82-4604, R.C.M. 1947), requires a thorough examination of the following questions during conduct of the performance audit:

"(a) Would the absence of regulation significantly harm or endanger the public health, safety, or welfare?

(b) Is there a reasonable relationship between the exercise of the state's police power and the protection of the public health, safety, or welfare?

(c) Is there another less restrictive method of regulation available which could adequately protect the public?

(d) Does the regulation have the effect of directly or indirectly increasing the costs of any goods or services involved, and, if so, to what degree?

(e) Is the increase in cost more harmful to the public than the harm which could result from the absence of regulation?

(f) Are all facets of the regulatory process designed solely for the purpose of, and have as their primary effect, the protection of the public?"

The report focuses on these questions.

Chapter I is introductory. It summarizes the objectives, organization, and scope of the report.

Chapter II presents background information about the evolution of the plumbing trade. Included in this background information is a history of the board and the trade and details on the board's organization, staffing, funding, and objectives.

Chapter III addresses two of the questions as required in the sunset law. The first question is: Whether or not the absence of regulation would harm the public? To answer this we reviewed the relevancy of the plumbing law and analyzed the effectiveness of current regulation. The other question is:

Whether a reasonable relationship exists between the exercise of the state's police power to regulate the plumbing trade and the protection of the public's health, safety, or welfare? To answer this question we examine existing conditions in the trade and the current activities of the board for licensure and regulation of the plumbing trade.

Chapter IV addresses another question posed by the sunset law: Whether all facets of the regulatory process are designed solely for the public's protection? Modifications of plumbing laws, the extent of public participation in board decisions, board regulation of entry into the trade, and the relationship between trade associations and the board are reviewed.

Chapter V covers two questions of the sunset law: Whether state regulation of the plumbing trade has the effect of directly or indirectly increasing costs to the public, and whether such increase is more harmful than the harm which could result in the absence of regulation?

Chapter VI discusses the final question of the sunset law: Whether there is a less restrictive alternative method of regulation available which could adequately protect the public? Seven alternative forms of regulation are discussed as they relate to the regulation of the plumbing profession in Montana.

SCOPE OF THE AUDIT

This sunset performance audit primarily relates to the need for state regulation of the plumbing trade. It focuses upon the six questions posed in the sunset law and includes an examination of the board's operational effectiveness.

Chapter II

BACKGROUND

EVOLUTION OF PLUMBING REGULATION IN MONTANA

"Modern plumbing began in the early 1800s when the steam engine was used to supply water under pressure and cheap cast iron pipes were employed to carry it."¹ Efforts by trade unions to organize members of the plumbing trade met with limited success until the latter part of the nineteenth century. Along with the push for unionization, an organized effort was made nationally to involve government in the regulation of the plumbing industry. Unions combined with shop owners to encourage municipalities to regulate and license plumbers formally.

Municipal regulation of plumbing became effective in Montana in 1913.² Towns in the state with more than 3,000 inhabitants were required by the state legislature to appoint a board of plumbing examiners. This board was authorized to review all applicants for the city plumbing license, collect a fee, and prepare and give an examination. Under this law, boards had the power to revoke licenses for incompetency, dereliction of duty, or other sufficient cause, after a hearing process. Individuals doing plumbing work without a license were guilty of a misdemeanor, and punishable (upon conviction) by a fine of not less than \$10 nor more than \$100 for each offense.

¹ The New Columbia Encyclopedia, 1975, p. 2170.

² Chapter 29, Sections 5183 through 5193, R.C.M. 1913.

Regulation of the plumbing trade by municipalities continued essentially unchanged until 1949. In that year the legislature created the Montana Board of Plumbing Examiners and gave this board virtually the same responsibilities and powers as the old municipal boards. Those plumbers holding municipal licenses were automatically granted state licenses. State licensing regulation was extended to any incorporated city or town containing more than 1,000 inhabitants. Membership on the state board consisted of one master and two journeymen plumbers and one representative of the public, all appointed by the Governor for four year terms. A fifth member of the board was the director of the Division of Sanitary Engineering of the Montana State Board of Health.

From 1951 to 1959 various legislation was introduced to expand licensing to all plumbers and generally increase enforcement powers of the board. Attempts to do so were unsuccessful until 1961 when the legislature passed a bill requiring all persons working on public water or sewer systems in incorporated towns to be licensed plumbers. The law (Section 66-2402, R.C.M. 1947), does not provide for licensure of contractors. The only individuals who can contract for the installation of plumbing are master plumbers or a firm or corporation employing a master plumber in a supervisory position.

In 1965 the plumbing laws were amended to establish experience requirements for license applicants, permit fees for plumbing installations, and to establish inspection processes for enforcement of the state plumbing code. In addition, the number of board members increased from five to seven. Both of the new

positions came from the plumbing trade--one master and one journeyman plumber.

Various minor legislative modifications of state plumbing regulation were introduced in every session from 1967 through 1975. During this period of time the board adopted the Uniform Plumbing Code, hired plumbing inspectors, and supported legislation to restructure the permit fee system. Some statutory modification of exemptions from plumbing regulation also took place. Currently, homeowners doing their own plumbing, installations in any mines, mills, smelters, refineries, public utilities, railroads, or plumbing on farms having their own water and sewage systems are exempt from the licensure requirement.

A significant change in the state's regulation of plumbing occurred in 1977 with the passage of Senate Bill 401, Chapter 504 Laws of 1977. Under this law, permit, inspection, and code setting duties were transferred from the board to the Department of Administration's Building Codes Division. Currently, the primary duties of the Board of Plumbers are to license plumbers and review complaints against these licensed plumbers.

BOARD'S ORGANIZATION, STAFFING, FUNDING

Administrative support for the Board of Plumbers is provided by the Department of Professional and Occupational Licensing. Plumbers dominate the seven member board (two master and two journeyman plumbers), with one member a registered mechanical engineer, one a public representative with no connection with the plumbing industry, and a representative from the Department of Health and Environmental Sciences. All board members are appointed

by the Governor for four year terms. Board members may be re-appointed.

A chairman and vice-chairman are elected yearly by the board with the secretary being designated by statute to be the Department of Health and Environmental Sciences representative. Procedural and organizational rules have been adopted from the Department of Professional and Occupational Licensing's model rules. Under the laws of Montana (Section 66-2409(2), R.C.M. 1947), the board may formulate rules and regulations necessary for the proper administration of the plumbing trade.

Meetings are held in Helena, usually four times a year, with examinations given to qualified applicants on Saturdays following the meetings. Board members, with the exception of the Department of Health and Environmental Science representative, receive \$20 per day compensation plus travel expenses while attending board meetings or when otherwise engaged in board connected business.

An administrative secretary supplied by the Department of Professional and Occupational Licensing spent 45 percent of her time on the board's business in fiscal year 1977-78. In April of 1978 the board hired a license inspector in an attempt to increase enforcement of the license requirements for plumbing work. Legal assistance for the board is provided by the department attorney. If any board requests additional legal support, the department may hire consultants or, in specific cases, consult the Attorney General's office.

Funding of board activities is provided for through an account in the earmarked revenue fund. Examination and license fees paid into this account supply this revenue fund. Illustration 2-1 details the financial history of the board from fiscal year 1969-70 to fiscal year 1977-78 and appropriations for the current biennium.

BOARD OF PLUMBERS

Financial History

Fiscal Year	Appropriations	Expenditures*	Revenue	Earmarked Revenue Fund Balance
1969-70	\$33,400	\$34,345	N/A	N/A
1970-71	35,000	28,593	N/A	\$ 7,117
1971-72	30,946	29,912	N/A	7,801
1972-73	31,345	32,578	\$ 40,204	15,427
1973-74	34,873	38,785	39,279	15,921
1974-75	40,236	48,744	32,965	8,143
1975-76	50,414	31,916	73,442	40,059
1976-77	87,244	71,492	102,880	71,447
1977-78	42,742	21,736	53,949	103,660
1978-79	46,160	-0-	-0-	-0-

*Includes prior year and accrued expenditure adjustments.

Note: Appropriation and expenditure decrease for fiscal year 1977-78 reflects transfer of code inspection duties to Building Codes Division July 1, 1977.

Source: Compiled by the Office of the Legislative Auditor.

Illustration 2-1

Appropriations are reduced for fiscal years 1977-78 and 1978-79 to reflect the transfer of inspection duties from the board to the Building Codes Division. Income in these two years will be decreased by approximately \$42,000 each year since permit fees are now paid to the Building Codes Division. In addition, the board, on March 3, 1978, decreased license renewal fees.

This action will reduce revenue by approximately \$16,000 from the previous year's total.

BOARD OBJECTIVES AND OPERATIONS

All boards and agencies under review are directed by the sunset law to define their goals and objectives and to link expenditures to these objectives. Goals and objectives have been defined by the board; however, expenditures have not been related to these objectives. The board established its goal as: "To assure to the public that all licensed master or journeyman plumbers are duly qualified to perform the work for which they have been licensed." Objectives as stated by the board to accomplish this goal are:

1. To protect the public from undesirable plumbing practices;
2. To license all persons qualified to be plumbers;
3. To investigate complaints and conduct hearings;
4. To provide technical assistance to the code enforcement agency;
5. To adequately examine applicants as to their competence, experience, and qualifications;
6. To review and renew those licenses currently in effect.

The board's activity deals mostly with complaint investigation, determination of experience qualifications, administering examinations, and issuance of licenses--both new and renewal. In addition, the board has placed a representative on the Building Codes Council which is responsible for the adoptions of building codes for the state.

Illustration 2-2 shows the number and types of complaints received by the board between 1974 and 1978.

COMPLAINTS TO BOARD

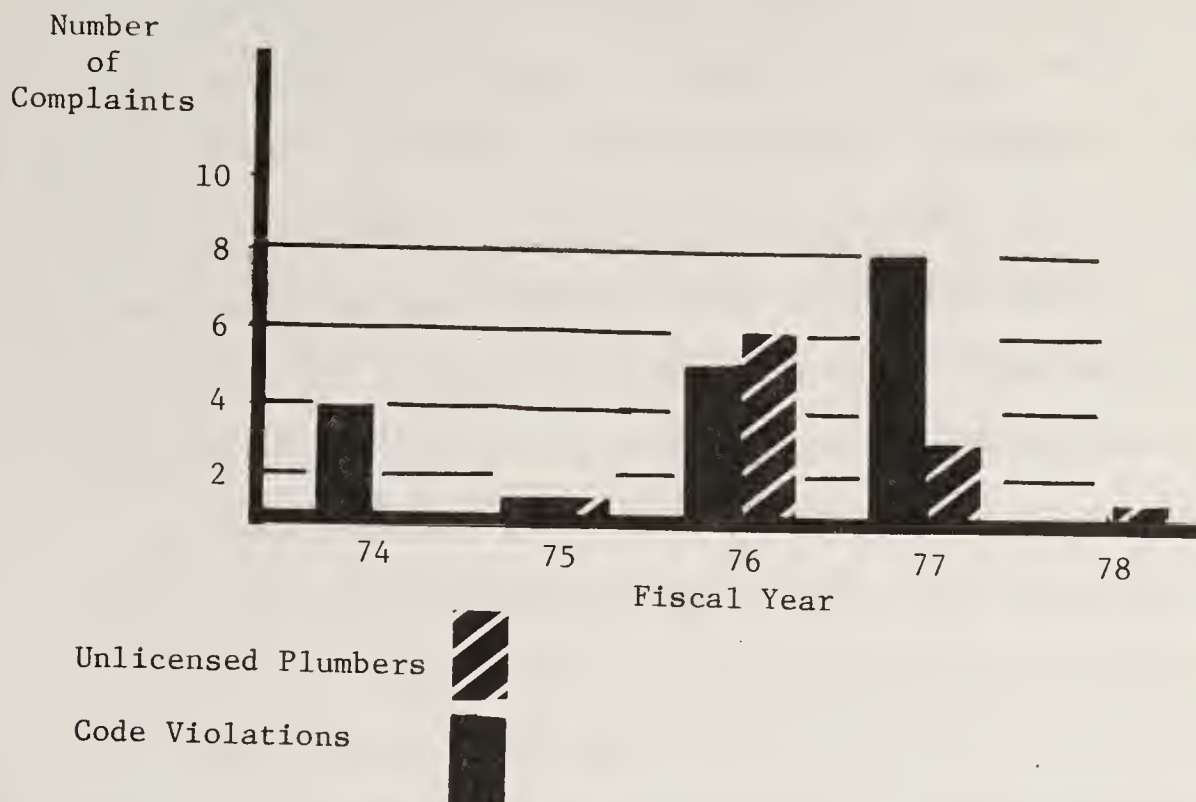


Illustration 2-2

Complaints outside the jurisdiction of the board, such as overcharging for a plumbing installation, are not recorded in the complaint register. These types of complaints may be acted on informally by the board. Complaints on code violations received by the board are now investigated by the Building Codes Division inspectors. Complaints against unlicensed plumbers are investigated (since April of 1978) by the board license inspector.

Since the transfer of inspection duties to the Building Codes Division, board hearings deal only with rule changes of the board and disciplinary action. During fiscal years 1975-76 and 1976-77, one public hearing for rule changes was conducted each year. The last disciplinary hearing was held in July 1975 and represents the only time the board revoked a plumber's license.

Licensure of plumbers is accomplished through a testing procedure and evaluation of experience as set by statute for both classes of plumbers. Journeyman candidates for licensure must have "A specific record of four year's experience in the field of plumbing of a character satisfactory to the board" (Section 66-2402.2(a), R.C.M. 1947). Master plumbers must have four year's experience as a journeyman plumber, three years of which must be in a supervisory position. Qualifications are evaluated on the basis of work history or training in the field of plumbing. Competence is determined by the candidates' ability to successfully pass a written and practical examination. Illustration 2-3 shows the number of master and journeyman plumbers taking the examination along with the number and percent passing the test.

PLUMBER'S EXAMINATION
1973 through June 1978

<u>Year</u>	<u>Type of Examination</u>	<u>Candidates Examined</u>	<u>Number Passing</u>	<u>Percent Passing</u>
1978*	Master	30	15	50%
	Journeyman	65	47	72%
1977	Master	37	18	49%
	Journeyman	100	61	61%
1976	Master	29	16	55%
	Journeyman	77	48	62%
1975	Master	26	14	54%
	Journeyman	53	33	62%
1974	Master	27	20	74%
	Journeyman	71	36	51%
1973	Master	19	17	89%
	Journeyman	56	36	64%

*Data for 1978 represents only two examinations. The test is usually given four times a year.

Source: Compiled by the Office of the Legislative Auditor.

Illustration 2-3

The review of licenses is partially accomplished by the Building Codes Division. Through the inspection process, work of licensed plumbers is reviewed for compliance with the code. Renewal of licenses is handled by the board administrative secretary and consists entirely of an annual payment of the license fee and issuance of a current license. No retesting or continuing education is required by the board for license renewal. Currently there are 353 licensed master plumbers and 885 licensed journeyman plumbers in Montana.

CHAPTER III

RELATIONSHIP OF STATE REGULATION

TO PUBLIC'S HEALTH, SAFETY, OR WELFARE

Two questions posed by the sunset law are addressed in this chapter. Would the absence of regulation significantly harm or endanger the public's health, safety, or welfare; and, is there a reasonable relationship between the exercise of the state's police power and the protection of the public health, safety, or welfare? In defining the purpose of the sunset legislation, Montana's sunset law (Section 82-4601, R.C.M. 1947), states, "The legislature questions whether conditions causing the establishment of these agencies, programs, and rules have not changed to such an extent as to remove the need for some or all of the agencies, programs, and rules." This chapter discusses whether a public need continues to exist for the current level of licensure and regulation of plumbers in Montana.

NEED FOR REGULATION IN MONTANA

The public in the instance of those effected by plumbing trade regulation is anyone who utilizes a public drinking water system and occupies a building with plumbing. The regulation is directed primarily towards construction installations of water and sewer drainage systems within a building or structure.

Traditionally, justification for plumbing regulation has centered around the potential for public harm. The predominant cause of public harm in plumbing installations is cross-connection of a source of pollution with a potable water (drinking water) supply. It is any connection, physical or otherwise, through

which it may be possible for contaminated water or material to enter any part of a potable water system under any conditions. The primary danger relates to a backflow or siphonage into the drinking water distribution system. They do not normally result from direct connection of a sewer line to the drinking water line to the drinking water main, but normally results from siphonage of private facilities when the water main pressure drops lower than that in the private plumbing. Cross-connections are the subject of a publication of the U.S. Environmental Protection Agency. The publication states:

"Public health officials have long been concerned about cross-connections and backflow connections in plumbing systems and in public drinking water supply distribution systems. Such cross-connections, which make possible the contamination of potable water, are ever present dangers. One example of what can happen is an epidemic that occurred in Chicago in 1933. Old, defective, and improperly designed plumbing and fixtures permitted the contamination of drinking water. As a result, 1,409 persons contracted amebic dysentery; there were 98 deaths."¹

The publication cites that plumbing cross-connections which connect drinking water supplies to nonpotable water are a health problem. It contains references to numerous and more recent instances of actual cross-connections with resultant illnesses and some deaths. It should be noted that many of the previous opportunities for cross-connections have been eliminated by industry manufacturing practices and that many instances of cross-connections are not related to plumbing installations--some

¹ Cross-Connection Control Manual, U.S. Environmental Protection Agency, Water Supply Division, 1975, P. 1.

occur accidentally by property owners attaching hoses to potable water outlets.

Incorrect venting of sewage draining systems presents an additional significant potential harm to the public. Some plumbing devices not meeting minimum code or failure to install venting causes the emission of noxious sewer gases into a home or building. Such inadequate venting can cause health hazards for occupants.

There are no documented cases of sickness or death in Montana relating to cross-connections or backflows caused by improper plumbing. Part of this may be due to the fact that the plumbing industry has built devices into a number of plumbing fixtures which eliminate the possibility of cross-connection from some sources. However the potential danger still exists and is a matter of attention in the Uniform Plumbing Code and plumbing inspections. Regarding the inadequate ventilation, there have been recent actual instances documented by the Building Codes Division.

Probably one of the reasons why there are no documented instances of physical harm occurring in Montana is the adoption of a plumbing code. The Building Codes Division has adopted the Uniform Plumbing Code for the state. Currently, cities considering a plumbing code must adopt only the code adopted by the Building Codes Division. Nine Montana cities currently have adopted plumbing codes. The purpose of the Uniform Plumbing Code is to provide minimum requirements and standards regarding the erection, installation, alteration, addition, repair, relocation, replacement,

maintenance, or use of plumbing systems, for the protection of public health, safety, and welfare. Enforcement of the plumbing codes occurs through an inspection process employed by the state Building Codes Division and nine Montana cities. Four other communities have working agreements with the Building Codes Division to do their own inspections. The acting administrator for the Building Codes Division estimates that about 60 percent of the new construction under the state's jurisdiction is inspected. Municipal inspectors believe all new construction under their jurisdiction is inspected.

We have been advised of five cases of financial loss due to improper plumbing that have produced law suits in Montana. Such instances of improper plumbing must be corrected to make the buildings habitable. The board and Building Codes Division files do not contain records to show the cost of correcting the deficiencies. However, in one instance the injured party advised that it cost \$1,084 to provide proper venting of the system. These cases involved work of both licensed and unlicensed plumbers.

Board members advised that without licensing of plumbers it would be impossible to adequately enforce the state plumbing code. This position was supported by field inspectors working for the Building Codes Division, along with the division chief plumbing inspector. In a questionnaire mailed to a randomly selected group of journeyman and apprentice plumbers, 91 percent of the respondents stated the quality of plumbing work would decrease if licensing were discontinued. One individual explained by stating that many shop owners would ignore code standards and

push for quantity rather than quality of work. Respondents to both interviews and questionnaires remarked that minimum code standards would not be adhered to without regulation.

Local inspectors all expressed a need for licensing and inspection of plumbers. They said licensing ensures a basic knowledge of minimum standards and inspection assures compliance to these standards. Several state inspectors and local building code officials commented that if the state discontinued regulation of the trade, municipalities would be forced to regulate plumbers. An article in the Notre Dame Law Review points up many problems associated with local regulation of trades. These problems include: verifying requirements for practice; requirements that an individual be licensed in every city worked in; verifying license fees; and differing degrees of regulatory enforcement.¹

Administrative officials of the Building Codes Division estimate that inspection time would double if licensure of plumbers were discontinued. Initial inspections and any necessary follow-up would have to be more thorough to compensate for work by inexperienced plumbers. This would mean that the number of state contract inspectors would increase. Smaller communities in the state which can not fall back on qualified local inspectors would be adversely affected by this increased workload because of the probable lag time which would occur in obtaining new inspectors.

¹ Notre Dame Lawyer, Occupational Licensing: An Argument For Asserting State Control, Vol. 44, pp. 104-21, October, 1968.

A potential liability to the state for missed or incomplete inspections may exist. The Building Codes Division could be liable for damages resulting from a violation of the building codes which were negligently allowed to exist by a state inspector.

As discussed earlier in Chapter II, there are exceptions within the law that allow persons who are not licensed to install plumbing. Perhaps the largest single category of those exempt from the law is homeowners. An owner of a single family residence used exclusively for his personal use may connect his plumbing to a public water or sewer system. State law does not require the homeowner to either take out a permit or have the installation inspected before the hook-up is made. This exemption contrasts with a related trade statute which requires all electrical installations to be inspected before a final hook-up. Seemingly this single exemption leaves a gap in public protection; however, the majority of cities doing their own inspection require inspection of all installations connected to the public system. Only those communities relying on state inspection, and not specifically requiring all inclusive inspection, are affected. Those communities whose building activity is not sufficient to support a plumbing inspector, lack a degree of protection for their public water and sewer systems.

In conclusion, there appears to be a remote potential danger of harm to the public's health, safety, and welfare. There are several regulatory possibilities which could provide protection against this potential danger--licensing by the board to assure

minimum qualification of all persons making plumbing installations; or inspection of all plumbing installations by state and municipal building code inspectors to assure proper installation; and/or a combination of licensure and inspection as is presently performed. Even with a lack of total inspection coverage and a significant amount of installations being done by unlicensed people, we were unable to show any instances of physical harm occurring in Montana due to cross-connections. There were instances of faulty installations done by both licensed and unlicensed plumbers, which caused financial loss. However, the board's regulatory powers were not the means used to resolve these problems--recovery and correction were sought through the courts. Licensing alone does not appear to be adequate considering the prevailing belief that contractors would not follow the code in order to reduce installation costs, and that inspectors do currently find minor code violations on most jobs inspected. Inspection could provide the necessary protection but should be extended to all new construction. It is estimated that inspection costs would increase without licensure.

RELATIONSHIP BETWEEN STATE'S POLICE POWER AND PROTECTION OF THE PUBLIC

In answering the first question dealing with the absence of regulation, we have recognized that there is a need for some form of regulation of the plumbing trade in Montana. The next question is whether a reasonable relationship exists between the public's need and the current exercise of the states police power by the board. The primary means by which the board meets the public's need is through the licensing process. The Building Codes Division

aids in meeting the public's need through its inspection process to enforce the Uniform Plumbing Code.

It is common among the states to license plumbers. A 1975 survey done by the board showed that 28 states licensed plumbers. Although 13 states responded that the state did not license plumbers, their answer indicated licensure of contractors (2 instances) and licensure of plumbers by other local entities (11 instances). Nine states failed to respond to the survey.

It appears that the licensure requirement is a reasonable relationship between the exercise of the state's police powers and the public's need. The licensure process is intended to evaluate whether experience and knowledge of the Uniform Plumbing Code is sufficient to assure proper and safe plumbing installations. The process to develop competence begins with the apprenticeship program which is designed to provide familiarization with the Uniform Plumbing Code and practical experiences. After four years experience, the plumber is permitted to take a written examination to test knowledge of the code and a practical examination to test his ability to perform.

Board members prepare and grade both master and journeyman examinations. Written portions of both tests are primarily based on the accepted plumbing code for Montana, the Uniform Plumbing Code. Tests are organized by the board administrative secretary from sheets of questions prepared by the board. Applicants who fail their first examination may retake the test the next time it is given--usually three months later. If the applicant fails the second examination he or she must wait one year to reapply.

Eighty-three percent of respondents to the journeyman and apprenticeship questionnaire stated they believed the examination ensured an adequate understanding of the code. However, several respondents commented that portions of the examination are out-dated. Specific portions of the written examination referred to were on the drawing section and questions related to business practices. Board members review examination questions periodically and rewrite questions as the code is updated.

Shimberg states that a major flaw of occupational examinations is the failure to adequately review examination results. He states that "One of the ways in which testing experts identify good questions and poor questions is through a process known as item analysis."¹ Basically, this procedure calls for review of examination questions to see if they are clear and do not mislead the applicant. Examination quality and consistency could be improved with this analysis. Such a review was undertaken by board members in 1976, yet a degree of impartiality could be gained by going outside the board for this task. Assistance in this type of analysis could be provided through the Department of Professional and Occupational Licensing and would likely be beneficial for many licensing boards. Consultants from private or public testing services or from the university system could be contracted to perform the analysis. Cost of this service would

¹ Benjamin Shimberg, Barbara A. Esser, and Daniel H. Kruger, Occupational Licensing: Practices and Policies, Public Affairs Press, Washington D.C., copyrighted in 1972 and 1973 by Educational Testing Service and Michigan State University.

have to be weighed against benefits derived before initiation by the board.

Another aspect which weakens the board's efforts to fulfill the public's protection is that the licensure provision in the law is not well enforced. Since the transfer of the code inspection function to the Building Codes Division the board only recently employed a license inspector. As mentioned previously, this individual and another that works for the State Electrical Board are responsible for license inspection for the entire state for both plumbers and electricians. The response to our questionnaire indicated a substantial amount of plumbing work being accomplished by unlicensed plumbers--39 percent of the plumbers responding said 20 percent of the plumbing in their areas was done by unlicensed plumbers while 42 percent of the respondents suggested a greater percentage was done by unlicensed plumbers.

The licensure enforcement could be much more effective if accomplished by state and municipal building code inspectors. Presently, the state inspectors do not check to ensure licensed plumbers are doing the work. The plumbing law (Section 66-2427(4), R.C.M. 1947), seems to indicate an overlap in this area of enforcement duties between the board and the Building Code Division. Inspectors for the division do report instances where they find unlicensed individuals performing plumbing work to the board. However, due to cost restrictions state code inspectors do not carry on investigations or further process license violations. Some discussion between the board and division has taken place on compensation of inspectors for the service, but a formal agreement

has never been made. Since building code inspectors are more numerous and are on most projects which have plumbing permits, the possibility for greater coverage for license enforcement exists and would probably be more effective than the board's enforcement. Such a change may require clarification of the statutes to place responsibility and authority for license enforcement with both the state Building Codes Division and municipal inspectors.

Certain exemptions in the plumbing statutes (Section 66-2401, R.C.M. 1947), impose gaps in the protection of the public. A homeowner is not required to obtain a licensed plumber, a plumbing permit, and code inspections when plumbing his own residence. Obviously, the accomplishment of plumbing by inexperienced homeowners presents a potential for hazards. This potential hazard can be reduced or eliminated completely by obtaining an inspection. However, in rural areas--outside the jurisdiction of municipal inspectors--the homeowner is not required to obtain a permit and the resultant inspection. The state inspectors generally provide assistance during the inspection process when homeowners request an inspection. The exemption from obtaining the plumbing permit further enhances the possibility of unlicensed plumbers doing the work, i.e., without a permit the license inspector is unaware of construction and likely would not check to determine who was performing the plumbing. Revision of the law to require permits (not a prohibition against homeowner plumbing) for homeowners would assist in eliminating potential

dangers of inexperienced workers and would provide a means of greater coverage for license enforcement.

The board does not have any procedures which evaluate continuing competence of licensed plumbers. Neither the plumbing law or the licensure process require journeyman or master plumbers to demonstrate their knowledge of plumbing after passing their license examination. Renewal of licenses is accomplished by submitting the required fee.

The law (Section 66-2419, R.C.M. 1947), provides that licenses may be revoked or suspended for work below minimum standards. After licensure, current board authority for enforcement of the plumbing law is restricted to revocation or suspension of licenses for work below minimum standards or for a master plumber's employment of an unlicensed journeyman. A hearing process is initiated by the board if sufficient evidence exists showing that standards have been violated. This evidence may be supplied by state or local inspectors, or by other parties familiar with the facts involved.

Initial board reaction to evidence of substandard work would be to persuade the plumber involved to correct his work. If the plumber either denied code violations or refused to modify work, a formal hearing ensues. Since its creation in 1949 the board has revoked one license and has had no formal suspension hearings. The revocation occurred in 1975 and represents the only time a formal revocation hearing has been held. More frequent exercise of this authority would serve to encourage licensed plumbers to

keep current on the plumbing code and exercise greater care in installations.

Discussion with plumbing inspectors indicated that almost every instance of job inspection for code compliance turns up at least minor violations of some sort. They advised that violations are particularly prevalent after an amendment to the plumbing code occurs. There are presently no procedures established to notify licensed plumbers of these amendments. A procedure whereby master plumbers--who are responsible for the work of those under them--are notified with copies of the amendments would contribute substantially to compliance with the code. This would require coordination between the code-making body, the Building Codes Division, and the board, which is responsible for the continuing competence of plumbers.

Another area of coordination which would greatly assist the board in evaluating the continuing competency of plumbers is communication of significant or repetitive code violations which the inspectors observe. Discussion with inspectors reveals that there are instances of licensed plumbers performing in an unqualified manner. We did not observe any formal contact between local inspectors and the board. Such a situation leads to fragmented application and enforcement of plumbing regulation with resultant unequal protection for the public.

An effective means of maintaining competency after licensure is a peer review process--members of the trade review the work of others and make recommendations for correction. The inspection performed by both the state and municipal inspectors could serve

this purpose if the instances of significant or repetitive code violations were routinely transmitted to the board. The board could then notify these offenders that correction was in order, require selective retesting if warranted and possible licensure revocation.

SUMMARY

Our review indicates that there is a need for some form of regulation of the plumbing trade. Although a potential exists for harm to the public from improperly installed plumbing work, we did not find any instances of actual physical harm in Montana due to faulty plumbing. We found some instances of financial loss resulting from the need to correct faulty plumbing installation. These installations were by both licensed and unlicensed plumbers and were resolved through the courts. We found that three possibilities exist which may meet the regulatory need--(1) licensure as practiced by the board, (2) plumbing code inspection as practiced by the state and municipal inspectors, and (3) a combination of licensure and inspection as currently accomplished. Is there a reasonable relationship between the exercise of the state's police power and the protection of the public from the potential harm? The board's activities, or exercise of police powers, evolve around licensing to demonstrate minimum qualifications of those performing plumbing. If licensure is considered a necessary regulatory requirement, certain aspects should be improved to make licensure more effective for protection of the public. Those aspects which warrant further consideration are:

(1) professional analysis of the examination to determine effectiveness in predicting performance of license candidates; (2) license inspection in conjunction with code inspection; (3) revision of the homeowner exemption to require plumbing permits and inspection; (4) more frequent use of the license revocation and suspension provision of the law; (5) notification of licensees of plumbing code amendments; and (6) development of the inspection process to provide a peer review system for subsequent competency correction, retesting and possible license revocation.

CHAPTER IV

REGULATORY PROCESS

This chapter addresses one question posed by the sunset law: Are all facets of the regulatory process designed solely for the purpose of, and have as their primary effect, the protection of the public? .

REGULATORY PROCESS DESIGN

A national expert on occupational licensing--Benjamin Shimberg--in discussing the origins of licensing, expresses the view that professions initially created voluntary associations to promote their professional interest.¹ Following voluntary organization came the enactment of statutory licensing. Licensing of trades historically began at the local level and gradually moved to state control with acceptance of regional building codes. Legislation affecting the plumbing industry has generally been supported by the two major plumbing organizations in the state; the Associated Plumbing and Heating Contractors of Montana and the United Association of Journeymen and Apprentices. Various other organizations and state agencies have supported specific legislation affecting the plumbing statutes. These organizations have taken an active interest in the business of the board and Building Codes Division activities.

PUBLIC PARTICIPATION

Montana law enacted in 1975 (Section 82-4226, R.C.M. 1947), requires that "Legislative guidelines should be established

¹ Shimberg, Esser, Krugen, op. cit., p. 197.

to secure to the people of Montana their constitutional right to be afforded reasonable opportunity to participate in the operation of governmental agencies prior to the final decision of the agency." A related section of Montana law (Section 82-4228, R.C.M. 1947), requires each agency to develop procedures for allowing and encouraging public participation. In response to these requirements of law, the Director of the Department of Professional and Occupational Licensing developed public participation rules. These rules have been adopted by the Board of Plumbers.

Public participation in board meetings has been very limited. Board members have questioned whether the public is even interested in the board's activities. Significant interest was generated in a 1975 hearing on removing the exemption, which allows homeowners to perform plumbing for their own residence. However, this was an exception to normal occurrence.

Public participation is limited by the fact that board meetings are usually held in Helena, on a quarterly basis. Holding meetings in various cities across the state would probably increase public participation in the board's activities. This procedure may increase costs, but it would afford greater opportunity for the public to participate. Holding examinations in cities across the state would present a greater problem. A test sight would have to include facilities for the practical part of the examination. Again the board would have to weigh cost and benefits to determine the overall gain. There is public participa-

tion to the extent that three members of the seven member board are not affiliated with the plumbing trade.

Complaints

Review of the complaint register disclosed that 27 complaints had been received by the board for a four year period ending in February 1978. Of this number 14 were submitted by consumers--none considered unlicensed plumbing work. The board has not had an effective license enforcement program since July 1, 1977 when the inspection responsibility was transferred to the Building Codes Division of the Department of Administration. Only recently has the board employed a license inspector. This employee and one other must cover the entire state checking for licensure of both electricians and plumbers.

We noted that the complaint register does not include all complaints received by the board. Complaints are screened to determine whether they are within the responsibility of the board and those which the secretary or a complaint committee believes are outside the boards responsibility are not recorded. More appropriately, each complaint should be recorded for review by the full board along with the final disposition.

Public awareness of the board's licensure responsibility is restricted to those being regulated. Lack of knowledge of the licensure requirement negatively affects the board's program to reduce unlicensed plumbing. This could be remedied partially by a program to inform the public of the importance of and requirement for licensure.

There would be considerable merit in consolidation of the license inspection process with the Building Codes Division code inspection process. The state plumbing inspectors could easily check for licenses on each project during the code inspection.

The plumbing regulation law (Section 66-2419, R.C.M. 1947), provides that any person licensed under the law who performs plumbing work below the minimum basic standards set forth in the state plumbing code is subject to having his license revoked. The state and municipal inspectors observe many such violations but do not routinely communicate repetitive violations to the board. Such a system of communication would enhance the board's capability of assuring satisfactory plumbing practices.

RESTRICTIVE ENTRY

Restrictive entry pertains to the concept that laws, rules, and regulations could prohibit qualified persons from entering a profession even though these persons have the qualifications necessary to perform the task expected of them. If entry into a trade or profession is overly restricted, the supply of services is limited. This may cause an increase in prices to the public. However, if entry into a trade or profession is too lax, the purpose of regulation is lost. Protection of the public health, safety, and welfare must be balanced between being overly restrictive and total lack of restriction. If a need exists to protect the public a certain level of restrictive entry to maintain quality is necessary.

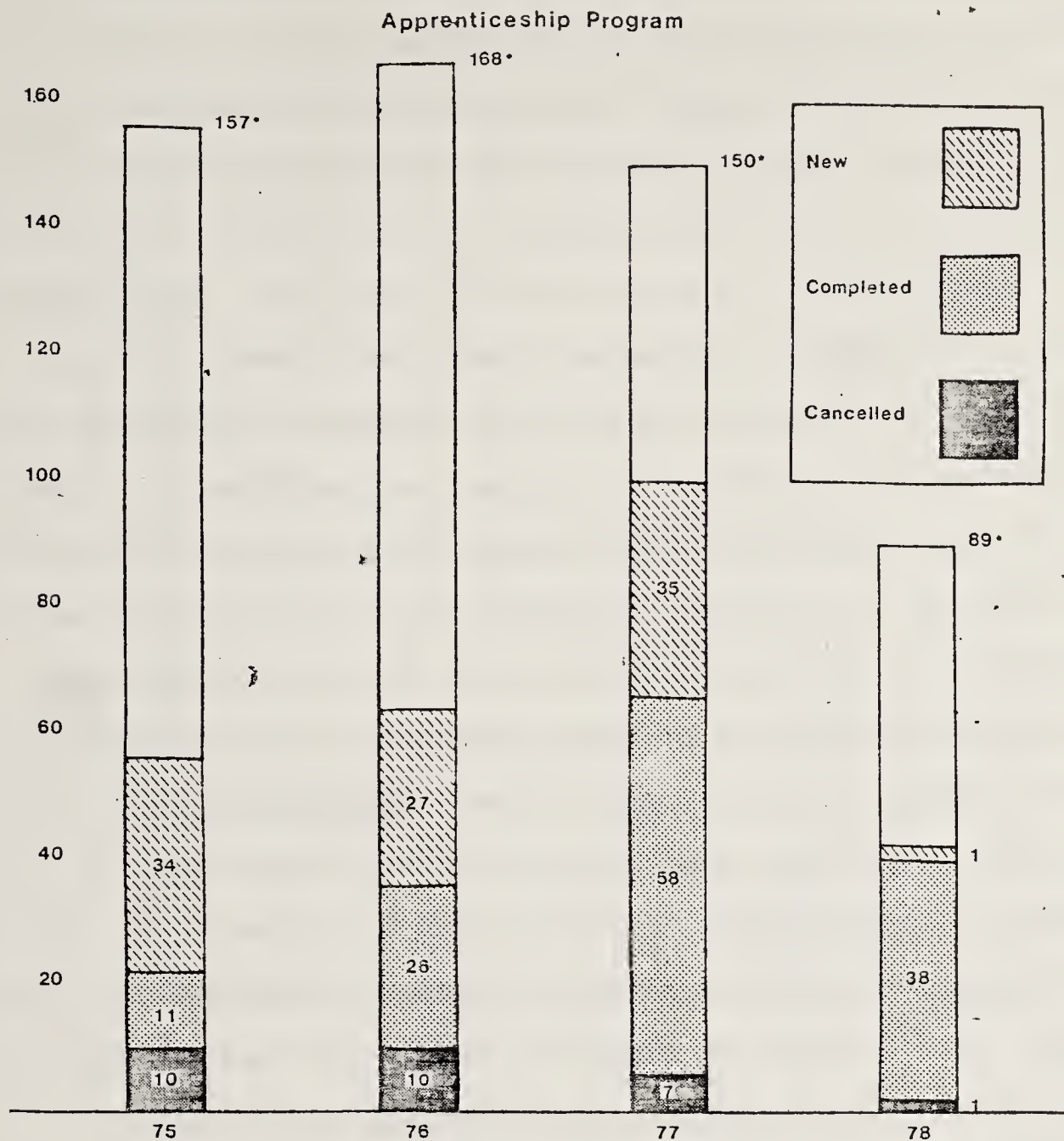
Apprenticeship

Apprenticeship programs are created to train individuals in both practical and theoretical areas. The programs should give the trainee a broad background in the trade and cover all necessary aspects of the trade. Adequate training should be assured through a thorough review of training materials and monitoring of procedures.

Master plumbers are required to "Employ only apprentice plumbers registered with the Department of Labor and Industry" (Section 66-2402 (5), R.C.M. 1947). Monthly reports are made to the board, but administrative authority over the 4 year apprenticeship program rests with the Apprenticeship Bureau, Department of Labor and Industry. As of March 1978, 89 apprentice plumbers were registered with the bureau--since this is a four year program it appears that the present apprentice program enrollees equate to only about 22 per year leaving the program as journeymen. Illustration 4-1 shows the number active in the program, new apprentices, and those who have completed or cancelled the program from 1975 through March 1978. The number of those completing the apprentice program has increased every year since 1975; however, participation in the program has not kept pace. Projected average annual openings for plumbers and pipe fitters are estimated to be 58 per year from 1974 through 1985.¹ Other sources may have to be depended on to supply plumbers if the number of apprentices in the program does not increase. Economically, limitation of the supply of

¹ Statewide Industry/Occupation Projections 1985, Research and Analysis Section, Employment Security Division, Department of Labor and Industry, p. 40.

plumbers will normally increase the price to the consumer of plumbing services.



*Notes average annual participation.

Source: Compiled by the Office of the Legislative Auditor
Illustration 4-1

JOURNEYMEN AND MASTERS

Journeyman and master plumbers are regulated by the board. Section 66-2402 (1) through (5), R.C.M. 1947, defines requirements for both categories of licenses. Journeymen are required

to have "Four years experience in the field of plumbing of a character satisfactory to the board." This requirement may be met by a combination of on-the-job-training or trade and school experience of value in the field of plumbing. A successful completion of an examination which includes both written and practical portions is required.

Requirements for a master plumber's license are: four year's experience as a journeyman plumber; three year's experience in supervisory capacities in the field of plumbing which may run concurrently with the requirement above, and, satisfactory completion of the master's examination. Applicants for a master's license who hold a Montana journeyman license take only a written examination; out-of-state applicants must take both a written and practical examination. The requirements exceed those of a journeyman; however, the master cannot work as a plumber without a journeyman's license. This places an unnecessary burden on master plumbers who wish to work with the tools of the trade. Although renewal fees for journeyman plumbers are only \$10 per year, master plumbers are responsible for assuring that all work by employees is in compliance with the plumbing code. This should negate the requirement that master plumbers who perform work hold both licenses.

Examinations

We noted that specific questions on the master plumbers examination relate to business computations. Although these questions cover information necessary for business activities, they do not relate to an individual's technical knowledge of

plumbing and do not relate to protection of the public's health, safety, and welfare. Applicants for this test receive an information sheet from the board indicating that questions demonstrating familiarity with business practices will be asked. However, master plumbers may or may not own a plumbing business or be involved with questions of this nature.

LICENSE FEES

As noted earlier, the board's expenditures are totally supported through examination and licensing revenues. All revenues are deposited to an account in the earmarked revenue fund. In some years, expenditures are less than revenues and excess revenue remains in the earmarked revenue fund.

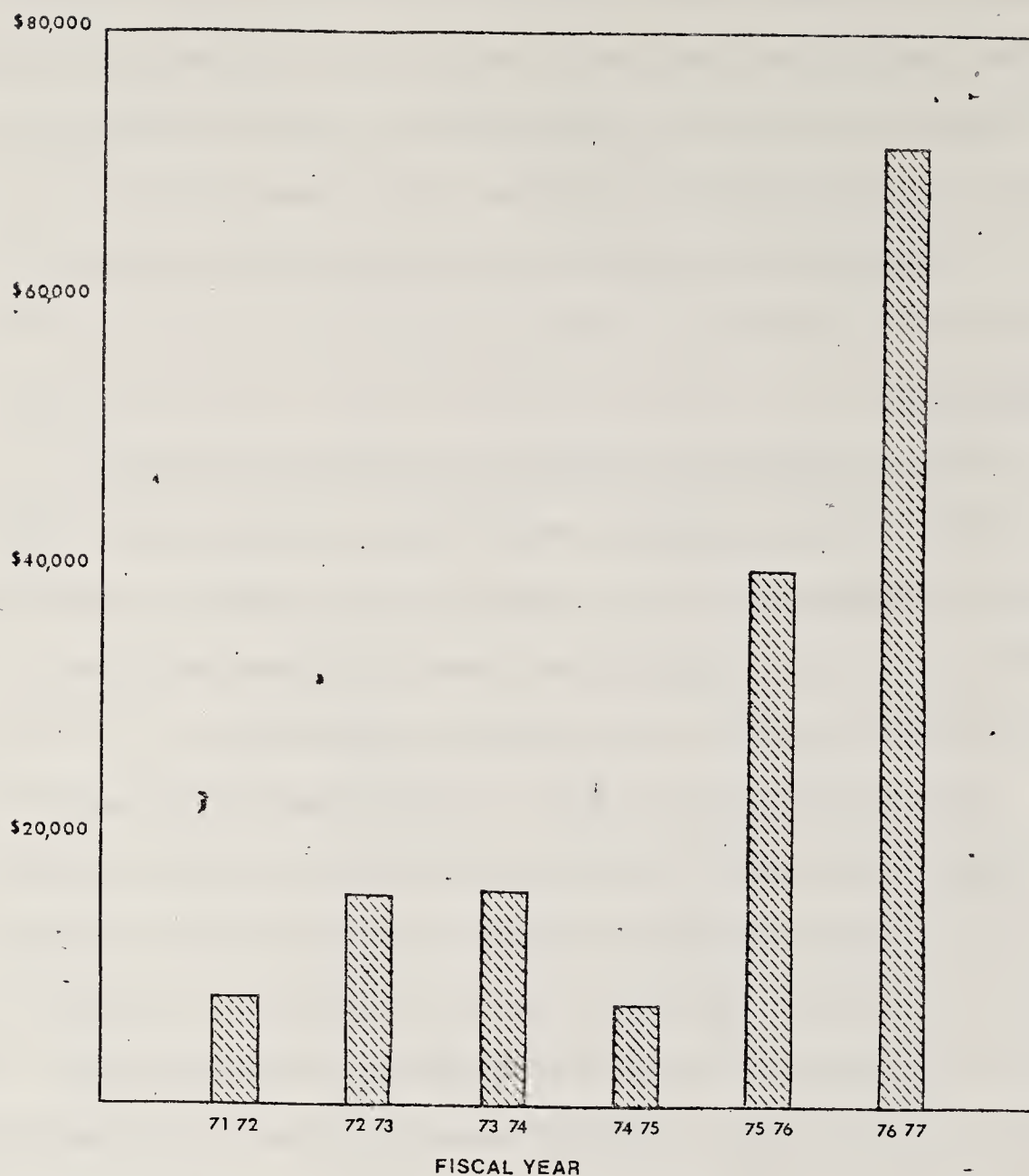
Illustration 4-2 shows that the account balance in the earmarked revenue fund increased markedly in fiscal year 1976-77. This was due principally to increased inspection and license fees received during that period; a 1975 law modified and required deposit of inspection fees in the earmarked revenue fund. On March 3, 1978 the board reduced its annual renewal fee to reduce the excessive fund balance.

However, the fees charged a master for examination and annual licensure does not have a relationship to cost of administering the program. Courts have addressed the question of how much a professional or occupational license can cost and they generally follow the rationale that fees must bear a reasonable correlation to the cost of administering an examination and licensing program.¹

¹ National Cable Television, Inc. vs. F.C.C., 554 F. 2d 1094, Federal Circuit Court, 1976.

Earmarked Revenue Fund

Account Balance



Source: Compiled by the Office of the Legislative Auditor
Illustration 4-2

Master plumber renewal fees are \$50 per year and journeyman fees are \$10 per year. While the total amount received from these fees may be necessary to cover board expenses, the difference in fees seems unjustified. Higher fees for master plumbers are based on ability to pay or higher status and not related to actual costs of renewal.

Examination fees are set by statute (Section 66-2405, R.C.M. 1947), and would have to be changed through legislative action. Currently, fees for the examination are \$100 for master and \$50 for journeymen. These amounts seem excessive and unrelated to actual costs since the journeyman's examination is more costly to administer. Examination of journeyman plumbers includes both written and practical portions while the master's examination includes only a written test.

SUMMARY

Are all facets of the regulatory process designed solely for the purpose of, and have as their primary effect, the protection of the public? Not all facets of the regulatory process are designed solely for the purpose of, and have as their primary effect, the protection of the public. Although the board has adopted rules of public participation, there has been very limited participation by the general public. The board has three members not directly connected with the plumbing trade and does obtain public participation to that extent. The complaint process could be improved by a public awareness program regarding licensure and by consolidation of the license inspection with the code inspection process. Further, the law should be amended to eliminate the requirement that a master have a journeyman's license to work with tools and make plumbing installations. The examination for a master's license should test for matters relating to protection of the public rather than business matters. The final facet that should be corrected is the seemingly excessive fee charged masters for examination and licensure.

Chapter V

Cost Considerations

This chapter addresses the fourth and fifth questions posed in the sunset law. Does regulation have the effect of directly or indirectly increasing the cost of goods or services? Is the increase in costs more harmful to the public than the harm which could result from the absence of regulation?

REGULATION COSTS

Costs of regulation are included in the monetary amount paid for goods or services. Regulation costs also include nonmonetary items such as the delivery and timeliness of goods or services--even the availability or absence of goods or services. The U.S. General Accounting Office (GAO), in a June 1977 publication, identified six classifications of costs associated with governmental regulation.¹ We reviewed GAO's cost classifications, adapted the categories as being the most reflective of identifiable governmental regulation costs, and organized these costs into five categories--administrative, compliance, inefficient use of resources, stagnation of technology and innovation and transfers. Our discussion relates to only two categories of these regulatory costs which can be identified as resulting from regulation of the plumbing trade.

ADMINISTRATIVE COSTS. Administrative costs are directly observable and related to governmental regulation. These include

¹ Report to Congress by the Comptroller General of the United States, Government Regulatory Activity: Justifications, Processes, Impacts, and Alternatives, June 1977, PAD-77-34.

costs imposed upon the public sector--the regulated plumbing trade as well as governmental expenditures necessary to administer the associated regulatory activity. Governmental administrative costs include expenditures which are used to operate the regulatory activity.

An observable regulatory cost would be the regulatory board's expenditures. These costs for the last six fiscal years are noted in Illustration 5-1. The costs to regulate plumbers are funded from licensed plumbers' annual license fees and examination fees. Each licensed master plumber pays \$50 annually to renew the license while journeymen pay \$10 a year. Applicants taking the examination must pay \$100 for the master and \$50 for the journeyman test. While these costs are ultimately passed to the consumer, they represent only a minimal cost.

Expenditures--Board of Plumbers

<u>Fiscal Year</u>	<u>Expenditures</u>
1977-78	\$21,736
1976-77	77,101
1975-76	41,252
1974-75	38,063
1973-74	38,760
1972-73	33,139
1971-72	29,912

Source: Compiled by the Office of the Legislative Auditor.

Illustration 5-1

Other administrative costs to the governmental sector exist but are not as easily quantified. The Governor's Office of Budget and Program Planning reviews the board's budget. The legislature also becomes involved with the review of the board and its budget process as well as with statutory changes requested

by the board. Thus, the administrative cost to regulate licensed plumbers exceeds the readily measurable expenditures and, unlike the board's expenditures, these other governmental administrative costs are paid for by taxpayers through general revenue collections. These costs are unmeasurable but they probably are minimal.

Administrative costs to the the plumbing trade amounts to the time necessary to fill out a renewal card and return it to the board. Licensed plumbers must fill out a short renewal card once a year. Although not directly measurable, this cost is minimal and insignificant on the part of the private sector.

In total, the administrative costs of plumbing regulations are represented in Illustration 5-1 plus other costs absorbed by government and the private sector. While we can assume these costs are ultimately passed to the consumer, the governmental and private sector administrative costs do not represent a significant burden to the Montana consumer of plumbing services.

COMPLIANCE COSTS. Compliance costs are incurred by both the private and governmental sector. These are imposed upon a regulated trade when specific actions and expenses must be incurred in order to comply with statutory requirements. Compliance costs can be identified in the governmental sector as those costs necessary to assure compliance with regulation. An example would be the inspection of a production facility by an Occupational Safety and Health Administration (OSHA) safety inspector. This requires governmental expenditures--a governmental compliance cost. The production facility's purchase of safety rails to meet

OSHA standards requires private sector expenditure--also a compliance cost.

Primary responsibility for inspection and enforcement of plumbing codes is under the authority of state and local building code officials and therefore are not applicable to the Board of Plumbers. However, the board inspects for license enforcement, investigates complaints and alleged violations, and holds hearings to determine who is at fault. Board action to suspend or revoke a plumber's license at such a hearing could lead to court proceedings. The last revocation hearing by the board was held in July 1975. However, these costs are included in the measured administrative costs which are considered minimal. Members of the plumbing trade that must answer complaints or license revocation proceedings incur minimal additional compliance costs.

PROBABLE COSTS OF DEREGULATION

In Chapter III we noted that absence of regulation of plumbers could harm the public. Faulty plumbing installations present a potential danger of contamination to potable water supplies and air with resultant illness and possible death. In addition, there have been instances of financial loss resulting from the need to correct improperly installed plumbing. However, enforcement of the Uniform Plumbing Code and protection through inspection would continue even if the board and its licensing function were discontinued. The cost of inspection would probably increase--the administrator of the state Building Codes Division estimates that if licensing did not exist inspection time would double and costs would increase by \$54,000 per year. Local building code

officials also anticipated increased costs if the state discontinued licensing.

Inefficiencies would also occur with deregulation because unqualified individuals installing plumbing will waste materials and produce work which must be redone. Public harm in this situation could involve both financial and physical loss. Increased litigation would likely occur as a result of deregulation. An additional potential increase in consumer costs may also result if municipalities elect to take over regulation functions of the board. Repetitive evaluation of experience, examination, and review may be more costly per capita on the local level than a single state wide licensure, i.e., a plumber working in more than one municipality would have to be licensed at each location.

SUMMARY

This chapter addressed two questions of the sunset law. Does regulation have the effect of directly or indirectly increasing the cost of goods or services, and is this increase in cost more harmful to the public than the harm which could result from the absence of regulation? Regulation increases the cost of plumbing services to the public. The board's regulation causes minimal administrative costs which are ultimately passed to the consumer. There are some identifiable compliance costs but they must be considered minimal. In other words, board regulation has the effect of increasing the costs of plumbing services to the public but only minimally.

But would the potential harm of deregulation be more costly than the increased costs caused by regulation? In the event that

the board's regulatory functions were discontinued, a potential danger to the public's health, safety and welfare exists. This potential danger could be resolved by the Building Codes Division inspection for code compliance but at a projected increase in inspection costs. Estimates of this increase are more than the board administrative costs. In addition, costs to correct improper plumbing installations and resultant litigation would probably increase since unqualified persons could perform plumbing.

Chapter VI

LESS RESTRICTIVE REGULATION ALTERNATIVES

A sixth and final question posed by the sunset law requires the evaluation of alternative forms of regulation. Specifically it asks: Is there another less restrictive method of regulation available which could adequately protect the public?

ALTERNATIVE REGULATION APPROACHES

In determining the appropriate regulation of the plumbing trade there are three major decisions which must be made. These decisions relate to: 1) the proper form of regulation, 2) the regulatory entity that is required under a particular form, and 3) the type and extent of regulatory requirements placed upon the industry in each case.

Following is a brief discussion of the three major decisions. The decision process is then summarized in check-list format. A more detailed discussion of alternative regulation approaches has been prepared as a supplement to this and other sunset audit reports.¹

THE PROPER FORM OF REGULATION

In relation to the first decision, there are a number of alternative forms of regulation ranging from the most extreme form--licensing similar to the present system--to the least extreme--no licensing or regulation whatsoever. Following is a discussion of seven forms of regulation. They are licensing,

¹ "Alternative Methods of Regulating Professions, Occupations, and Industries"--A Supplement to the Sunset Performance Audits, Office of the Legislative Auditor, 1978.

practice restriction, reserve of title, limited statutory regulation, registration, certification, and no regulation.

Licensing involves the stipulation of requirements and prerequisites and the granting of the right or permission to carry on a business or profession. Licensing necessitates an administrative body that establishes rules and monitors the profession or occupation on an ongoing basis. Licensing is considered to be the most extreme form of regulation.

Restriction of practice is the next lesser form of regulation. Under a practice law form of regulation, individuals or companies would not be permitted to perform a specific service or act, or hold themselves out as being able to perform such services, unless they have met certain statutory requirements.

Reserve of title is less restrictive than restriction of practice. Under reserve of title regulation, anyone who desires could engage in the profession or occupation. Only the titles "licensed" or "certified," etc., would be reserved for those who had met certain requirements such as an examination.

Limited statutory regulation can be considered even a lesser degree of state regulation than the previous forms. The state would regulate the industry only through statutes specifying certain limitations. Limited statutory regulation differs from a practice law in that there are no statutory requirements that are "job or ability related" (i.e., examination requirement). The law would require only "after-the-fact" protective measures (i.e., bonding and insurance).

Registration, the next alternative, would afford the opportunity to persons practicing in the profession or trade to register with the state or with a private trade or professional association. An individual or company applicant would not have to demonstrate competency or prove qualification, but would just register his name or the company's name.

Certification, as we define it, is individual oriented and requires no direct involvement by a state governmental body. The plumbing trade would be responsible for certification requirements and procedures, and would be self-regulating. Certification would provide for public identification of those individuals designated by the industry as certified, but the trade could not limit the practice of plumbing to only those certified.

The least extreme form of regulation is no regulation. The public would still have protection and recourse through the Consumer Affairs Division of the Department of Business Regulation under the Unfair Trade Practices Act (Chapter 275, Laws of Montana, 1973), which protects the consumer from fraud and deception. Criminal and civil remedies can also be sought under the Uniform Commercial Code and other laws directed at specific abuses. It is important to again note that the laws on consumer protection are in effect at the present time and would be in effect under all of the alternatives discussed.

THE REGULATORY ENTITY

Regulatory entities can take many forms depending upon the degree of state regulation needed. We have identified six regulatory entities: trade state board, trade-public state board,

public state board, state department/agency, trade association, and state/local agency (indirect involvement).

The traditional form of regulation of trade and industries is accomplished by trade boards. These boards are made up entirely of members of the trade or industry. Boards can also be made up of a combination of trade members and of members from the public. A board could also consist entirely of members from the public.

Regulation could be accomplished through the direct involvement of a state department or agency. If no direct regulation by the state is necessary, then a trade association could regulate its membership. In addition, indirect involvement by a state agency is available if direct state regulation is not necessary. For example, the Consumer Affairs Division could investigate and resolve consumer complaints against any industry or occupation even if that industry or occupation were not directly regulated by the state.

TYPES OF REGULATORY REQUIREMENTS

If some form of regulation is determined to be appropriate for the plumbing trade, then certain requirements and conditions for licensure must also be established.

Educational, experience, and examination requirements, as conditions for licensure, could be established by statute and administered by the regulatory body. Means of financial protection for the public and licensees could be required in the form of bonding, recovery funds, liability insurance, etc.

The regulatory body, through its administrative branch, may collect fees such as those for examinations and licenses, and issue a document to plumbing shops and to plumbers (license) following successful compliance with such prerequisites. The regulating body could have the authority to promulgate rules and adopt codes of conduct. It could deny, suspend, or revoke licenses based upon noncompliance, violations, or incompetence. The regulatory body could also have investigative and monitoring functions.

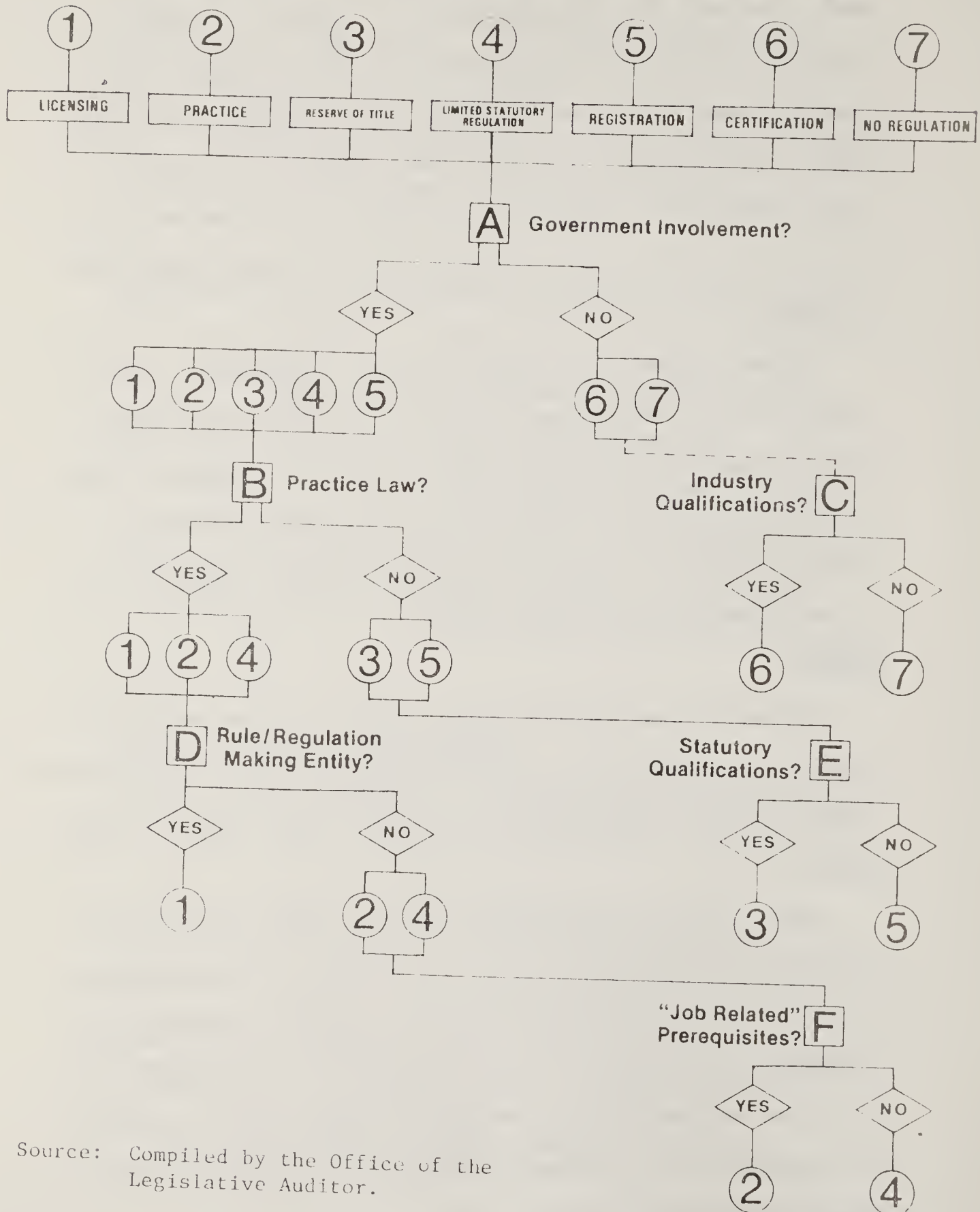
Periodic renewal of licenses could be a requirement. This renewal can be a mere payment of a fee, as is the present situation, or renewal could depend upon the applicant meeting certain qualification standards. Thus, licensees could be required to maintain proficiency through continuing education, passage of a periodic examination, or peer review.

SUMMARY

The decision as to the extent to which the state needs to be involved in regulation of a trade or industry requires the analysis of many factors. We have briefly discussed these factors in this chapter.

These factors are presented in decision chart format in the following Illustrations 6-1, 6-2, 6-3, and 6-4. A more detailed discussion of the alternative methods of regulation appears in a supplement to this report. The supplement has been designed for all of the regulatory boards subject to sunset reviews. Because the supplement is all inclusive, some of the titles do not match those used in this report.

DECISION CHART TO DETERMINE THE FORM OF REGULATION



Source: Compiled by the Office of the Legislative Auditor.

Illustration 6-1

ALTERNATIVE REGULATORY BODY UNDER EACH FORM OF REGULATION

	LICENSING	PRACTICE	RESERVE OF TITLE	LIMITED STATUTORY REGULATION	REGISTRATION	CERTIFICATION	NO REGULATION
TRADE STATE BOARD ► Multi-member; or ► Commissioner	☐						
TRADE -PUBLIC STATE BOARD ► Multi-member	☒						
PUBLIC STATE BOARD ► Multi-member; or ► Commissioner	☐						
STATE DEPARTMENT/AGENCY ► Direct involvement	☐	☐	☐	☐	☐		
TRADE ASSOCIATION ► Industry involvement					☐	☐	
STATE/LOCAL AGENCY ► Indirect involvement ► Civil/Criminal Sanctions	☐	☐	☐	☐	☐	☐	☐

■ Indicates present form of regulation

Source: Compiled by the Office of the Legislative Auditor.

Illustration 6-2

ALTERNATIVE REQUIREMENTS UNDER EACH FORM OF REGULATION

	LICENSING	PRACTICE	RESERVE OF TITLE	LIMITED STATUTORY REGULATION	REGISTRATION	* CERTIFICATION	NO REGULATION	PRESENT FORM
1. Rule/Regulation Making Entity	●							●
2. Educational Requirements	●	●	●			●		
3. Experience Requirements	●	●	●			●		●
4. Examination	●	●	●			●		●
5. Right of Denial	●	●	●	●		●		●
6. Revocation/Suspension	●					●		●
7. Issuance of a Document	●				●	●		●
8. Investigation/Enforcement	●					●		●
9. Periodic Renewal	●				●	●		●
10. Continuing Education	●					●		
11. Retesting	●					●		
12. Reciprocity/Comity	●	●	●	●	●	●		
13. Bonding	●	●	●	●		●		
14. Recovery Fund	●					●		
15. Errors and Omissions Insurance	●	●	●	●		●		
16. Fees	●	●	●		●	●		●
17. Individual Oriented	●	●	●	●	●	●	●	●
18. Facility Oriented	●		●	●	●	●	●	
19. Peer Review	●	●	●			●		

*Determined by industry body

Source: Compiled by the Office of the Legislative Auditor.

ALTERNATIVE REQUIREMENTS UNDER EACH FORM OF REGULATION

SUPPLEMENTAL

	LEVELS		
	CONTRACTOR	MASTER	JOURNEYMAN
1. <i>RULE/REGULATION MAKING ENTITY</i>			
2. <i>EDUCATIONAL REQUIREMENTS</i>			
3. <i>EXPERIENCE REQUIREMENTS</i>			
4. <i>EXAMINATION</i>			
5. <i>RIGHT OF DENIAL</i>			
6. <i>REVOCATIONAL/SUSPENSION</i>			
7. <i>ISSUANCE OF A DOCUMENT</i>			
8. <i>INVESTIGATION/ENFORCEMENT</i>			
9. <i>PERIODIC RENEWAL</i>			
10. <i>CONTINUING EDUCATION</i>			
11. <i>RETESTING</i>			
12. <i>RECIPROCITY/COMITY</i>			
13. <i>BONDING</i>			
14. <i>RECOVERY FUND</i>			
15. <i>ERRORS AND OMISSIONS INSURANCE</i>			
16. <i>FEES</i>			
17. <i>INDIVIDUAL ORIENTED</i>			
18. <i>FACILITY ORIENTED</i>			
19. <i>PEER REVIEW</i>			

★
DETERMINED BY INDUSTRY BODY

Source: Compiled by the Office of the Legislative Auditor.

Illustration 6-3

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